Work Order ID 59780 <i>Friday, June 11, 2010 11:42:44 AM</i>											Page 1
Item ID: Revision ID:	D206-642-5	41		Accept					Setup S	art	
Item Name:	Replacement	Skidtube							S	top	
Start Date: Required Date: Reference:	6/10/2010 6/25/2010	Start Qty: 1.00 Req'd Qty: 1.00	1 (1810) (181 (188) 1 (1810) (181 (181		Cust Item I Customer:	D:				1100	
Approvals:	Process Pla	an:	Date:	Tooling: SPC (Y/N):		ate:]		tart	
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Rejec Numl	
Draw Nbr	Rev	ision Nbr									
D3274	D										1
IIN-D206-642	Rev	M									
		DOCUMENT CONTRO	NI .	0.00							

0.00

Photocopy bluefile & type labels per PPP D206-642-541

Memo

Document Control

Dart Ae	rospace	Ltd						94.			
W/O:			WC	RK ORDER CH	ANGES						
DATE	STEP	PR	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approv QC Inspect	
								,			
Part No): <u>- </u>	PAR #:	Fault Cate	gory:	No	CR: Yes	No DQA		Date: _		
Resolution:			Disposition:			QA: N/C Closed:			Date:		
NCR:			WORK ORDI	ER NON-CONFO	ORMANC	E (NCR)				
DATE	STEP	Description of NC		Corrective Action	Section B		Verifica	tion	Approval	Approva	
		Section A	Initial Chief Eng	Action Descrip	otion	Sign & Date	Section	С	Chief Eng	QC Inspect	
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D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name: Replacement Skidtube

Start Date:

6/10/2010 Start Qty: 1.00

Required Date: 6/25/2010 Req'd Qty: 1.00

QC:



Cust Item ID: Customer:

Tool ID

Reference:

Approvals	:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date: Date:

Tool #

Plan

Code '

Run Start

Reject

Qty

Accept

Qty

Reject

Number

Stop



Insp.

Stamp

Sequence ID/ **Work Center ID**

110



Skidtubes

Operation

Description

Memo

0.00

0.00

Skidtubes Skidtubes

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding,

3- weld fwd cap as per dwg D3274 and QSI004 AR Aluminum Rod Batch: 1112 50 7 m114242

10/06/15 10/06/15

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

M 10/6/16

18E 3

Dart Aerospace L	td
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W/O:			WORK ORDER CHANGES					. 1
DATE	STEP	PR	OCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No):	PAR #:	Fault Category:	NCR: Ye	s No DQ	A:	Date: _	1007-14
	Resolut	ion:	Disposition:				Date: _	

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
		Description of NC		Corrective Action Section B		Verificatio	Annroyal	Annroyal
DATE	STEP	Section A	Initial Action Description Chief Eng Chief Eng		Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector
		AST hand 15 3,185"	P	Acceptable.			W	
10:06:0B	110	high lest process at	10.86.28	Increases day drag		\subseteq	1006.75	
		Aft bond is 3.185" high. R.C. process, only 0.085" oner elugalin	65/ ap	Acceptable. Increases day dras moment, counter-acts touyand	10-7-1	bloth	951 642	10/12/0
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Work Order ID 59780

Friday, June 11, 2010 11:42:44 AM



Page 3

Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date: 6/10/2010

Required Date: 6/25/2010

Start Qty: 1.00

Rea'd Otv: 1.00



Cust Item ID:

Customer:

Reference:

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Process Plan:

Memo

Memo

Memo

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Set Up/

Date:

Stop



Sequence ID/ Work Center ID

120

HandFinish

Hand Finishing

Operation Description

Chemical Conversion Coat per QSI005 4.1

Run Hours

0.00

0.00

Tool ID

Tool # Plan Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

M10/6/16

130

QC

Quality Control

QC3- Inspect Part Finish

MA 1. 7

140

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

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W/O:	- 		\A/	ODK ODDED OU	MOEO					• • •
VV/O .			VV	ORK ORDER CHA	ANGES					
DATE STEP		PRO	OCEDURE CHA	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	•	PAR #:	Fault Cate	egory:	NCI	R: Yes	No DQA :		_ Date: _	
Resolution: Disposition: QA: N/C Close				osed:	Date:					
NCR:			WORK ORD	ER NON-CONFO	RMANCE	(NCR)		***************************************	
DATE	STEP	Description of NC Section A	Initial	Corrective Action Action Descript	Section B	Sign &	Verifica		Approval	Approval
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Work Order ID 59780

Friday, June 11, 2010 11:42:44 AM



Page 4

Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Start Date:

Item Name: Replacement Skidtube

Required Date: 6/25/2010

QC:

Start Qty: 1.00 6/10/2010

Req'd Qty: 1.00

Cust Item ID: Customer:

Reference:

Approvals:

Process Plan: _____

Date: Date:_____ Tooling:

SPC (Y/N):

Date:

Tool ID

Start Stop



Sequence ID/

Work Center ID

150

Skidtubes Skidtubes

Operation Description Set Up/ **Run Hours**

Tool # Plan

Date:

Accept Code Qty

Reject Qty:

Run

Reject Insp. Number Stamp

Skidtubes

0.00

0.00

1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015. A/R \Box Sikaflex-291 \Box \Box \Box

Sikaflex expire date: \(\begin{array}{c|cccc} \lambda & \lambda &

(Adhere for 12 hours)

M 10/6/16

160

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

Dart	Aerospace	Ltd

W/O: WORK ORDER CHANGES										
DATE	STEP	PROC	EDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No: PAR #:									_ Date: _	
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NOTE 5										

Work Order ID 59780

Friday, June 11, 2010 11:42:44 AM



Page 5

Item ID: **Revision ID:** Item Name:

D206-642-541

Replacement Skidtube

Accept



Setup Start



Stop

Start Date:

6/10/2010

Required Date: 6/25/2010

Start Otv: 1.00

Reg'd Oty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: Date:

Tooling:

Date:

Run

Start Stop



QC:

Date: _____

SPC (Y/N):

Date:

Reject

Insp.

Sequence ID/ **Work Center ID** 170

Skidtubes

Skidtubes

Operation Description

Set Up/ Run Hours

Tool ID

Tool # Plan Code

Accept **Qty**

Reject Oty -

Number

Stamp

Skidtubes

Memo

0.00

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2

OPEN HOLES TO .297". Deburr

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD **END OF TUBE**

DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

180

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

Dart Ae	rospace	e Ltd	•					i		,
W/O:			V	VORK ORDER CHANG	GES					
DATE	STEP	PROCEDURE CHANGE			E	Зу	Date	te Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto

Part No):	PAR #:	_ Fault Ca	itegory:	_ NCR:	Yes N	lo DQA :		_ Date: _	
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NCR:		- ·	ORK OR	DER NON-CONFORM	ANCE (NCR)				•
DATE	CTED	Description of NC	Corrective Action Section B				Verifica	alion Anu	Approval	Approva
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section		Chief Eng	QC Inspecto
		height is over had by 10854								
1.100	TAP	measures 3.765 " should be		& Jee Man in back	- _		. /	4 /		5
10/6/24	190	measures 3.765 " should be 3. NOO. Q.c. Process		of see non in back	Jo4/27		NIA		1	12/06/24
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Friday, June 11, 2010 11:42:44 AM



Page 6

Item ID:

D206-642-541

Accept

Accept

Qty

Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

Required Date: 6/25/2010

6/10/2010

Start Qty: 1.00 Req'd Qty: 1.00

Cust Item ID:

Customer:

Tool ID

Reference:

A	pp	ro	val	s:

QC: ____

Process Plan: ___ Date:

Operation

Description

Skidtubes

Date:

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date: Date:

Tool # Plan

Code

Run

Reject

Qty

Start

Stop



Stop

Reject

Number Stamp

Insp.

Sequence ID/ **Work Center ID**

190

Skidtubes Skidtubes

Memo

Memo

0.00

0.00

D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R | Aluminum Rod | M 112-50

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg

200

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

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Dart Ae	rospace	Ltd								
W/O:			WC	RK ORDER CHANGE	ES		,			
DATE	STEP	PRO	PROCEDURE CHANGE				Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
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Work Order ID 59780

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Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

Required Date: 6/25/2010

6/10/2010

QC:

Start Qty: 1.00

Req'd Qty: 1.00



Date:

Cust Item ID:

Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Tool # Plan

Code

Start Run

Reject

Qty

Accept

Qty

Stop

Reject

Number



Insp.

Stamp

Sequence ID/

Work Center ID

210

QC

Quality Control

Operation Description

QC10- Inspect visual per QSI004- ground welds

Set Up/ **Run Hours**

0.00

810/07/01

220

HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

Memo

0.00

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

D St 10-7-1

230

Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum NUH841

0.00

0.00

1 bl 10-7-66

Dart Aerospace Ltd

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W/O:		WORK ORDER CHANGES							* •		
DATE	STEP	PROCEDURE CHANGE By Date				Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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Part No: PAR #:			Fault Cate	jory:	_ NCI	R: Yes					
Resolution:			Disposition	n:	_ QA:	N/C CI	osed:	Date:			
NCR:			WORK ORDE	R NON-CONFORM	ANCE	(NCF	1)				
DATE	STEP	Description of NC	Corrective Action Section B			Ve		ion	Approval	Approval	
	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date		Section C		QC Inspector	
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Work	Order II	D 59780
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Friday, June 11, 2010 11:42:44 AM



Page 8

Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Item Name: Replacement Skidtube

Start Date:

6/10/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

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Process Plan: _____

Date: _____

Tooling:

Date:

Start Run

Reject

Oty

Required Date: 6/25/2010

Date: _____

SPC (Y/N):

Tool ID

Date:

Tool # Plan

Code

Stop

Number Stamp

Insp.

Sequence ID/ Work Center ID

240

QC

Quality Control

Operation Description

QC3- Inspect Part Finish

Memo

Run Hours

Set Up/

=) M 10107106

Accept

Qty

Reject



HandFinish Hand Finishing HandFinishing

Memo

Memo

0.00

0.00

0.00

M 10107/06 XI P

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R \square N/A \square LPS-3 \square _ \upMathcal{N} (§ 5 \upmu

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/ROSikaflex-291 DMUSSIGN Sikaflex expire date:

260

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

S 10/02/06

Inspect Nut Plate & Inserts

Dart Aerospace	Ltd
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W/O:		WORK ORDER CHANGES								· · · · · · · · · · · · · · · · · · ·
DATE	STEP	PRO	PROCEDURE CHANGE By Date					Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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	R	esolution:	Disposition	on:	QA: N/C Closed: Date:					
NCR:			NORK ORD	ER NON-CONFORMA	NCE (N	ICR)				
DATE	STEP	Description of NC Section A	Corrective Action Security Initial Action Description Chief Eng			gn & Date	Verifica Section		Approval Chief Eng	Approval QC Inspector
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Work Order ID 59780

Friday, June 11, 2010 11:42:44 AM



Page 9

Item ID:

D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

Required Date: 6/25/2010

6/10/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Start Run

Sequence ID/

Work Center ID 270

HandFinish

Operation Description

Set Up/ **Run Hours** Tool ID

Tool # Plan Code

Accept Qty

Reject Reject Number

Stop

Insp. Stamp

HAND FINISHING RESOURCE #1

Memo

0.00

10/07/13 XI Ø

Qty

Hand Finishing

2-Install ring as per Dwg D3274

Sikaflex expire date:

 $A/R \square Sikaflex-291 \square M(135/6\square$ D10111

__3-Inspect for foreign objects as per QSI 024

1-Install wearpads & gaskets as per Dwg D3274.

4-Spray inside of tube on both sides of web with LPS-3 Batch: N/A

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

Sikaflex expire date:

A/R | Sikaflex-291 | 1/1/3504

280

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

DATE STEP PROCEDURE CHANGE By Date Qty Approval Chief Eng / Prod Mgr QC In Prod	•
	roval spector
	**
Part No: PAR #: Fault Category: NCR: Yes No DQA: Date:	
Resolution: Disposition: QA: N/C Closed: Date:	
NCR: WORK ORDER NON-CONFORMANCE (NCR)	
DATE STEP Description of NC Corrective Action Section B Verification Approval Approval Approval	roval
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Work Order ID 59780

Friday, June 11, 2010 11:42:44 AM



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Item ID:

D206-642-541

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date: 6/10/2010

QC: __

Required Date: 6/25/2010

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Date:_____

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:

Start Run

Stop

Sequence ID/

Work Center ID

Packaging

Packaging

Operation **Description**

Identify as per dwg & Stock Location:

0.00

0.00

Tool ID

Tool # Plan Code

Accept Qty

Reject Reject Qty

Insp. Number Stamp

QC

300

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:			WC	RK ORDER CHANG	iES	······································			
DATE STEP		PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
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Part No	:	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQA :		Date:	
	Resc	olution:	Disposition	n:	_ QA: N/C Cld	sed:		Date: _	
NCR:			WORK ORDE	ER NON-CONFORMA	ANCE (NCR)			
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Friday, June 11, 2010 11:4	42:49 AM				Page
Work Order ID: 59780 Parent Item: D206-642	-541	18 2011 1814 1815 1816 1816 1816 1916 1816 1816 1816 1816 1816 1816 1816			40 y 40 d
Parent Item Name: Replace	cement Skidtube			Start Date: 6/10/2010	Required Date: 6/25/2010
Comments: IPP R IPP R IPP R IPP R	ev:D 07-12-06 replace NAS1515			Start Qty: 1.00	Required Qty: 1.00
D2600-1-190 Extrusion Round 3" 206	Manufactured No		110 Each	36.0000 1 1	
Extrasion Round 3 200		LG 47575	Loc Oty 36 36	Loc Code	10-6-15
D3285-1 Cap	Manufactured No		110 Each	153.0000 1 1	
		Location	Loc Qty	Loc Code	
		LG	153		
		47635	4		_ BE10/06/15
		52511 52647	74 75		
D3282-041 Float Web (206L/407)	Manufactured No		150 Each	6.0000 1 1	
(======================================		Location	Loc Qty	Loc Code	·
D2649 Cross Bolt Spacer	Manufactured No	LG 57539	6 6 190 Each	147.0000 1 1	M 10/6/15

Location	Loc Oty	Loc Code		
LG	147			
55000	6			BE 10/06/29
58545	141		12_	DE 10/06/01
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Dart Aerosp	ace Ltd	
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W/O:		WORK ORDER CHANGES								
DATE	STEP	PRO	OCEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Cate	egory:	_ NCR:	Yes N	o DQA:		Date:	
	R	esolution:	Disposition	on:	_ QA: N	I/C Clos	sed:	<u> </u>	Date:	
NCR:		•	WORK ORE	ER NON-CONFORMA	ANCE (NCR)				
DATE	STEP	Description of NC Section A	Initial	Corrective Action Section Action Description		Sign &	Verifica		Approval	Approval
		Section A	Chief Eng	Chief Eng		Date	Section		Chief Eng	QC Inspector
										
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Picklist Print

Friday, June 11, 2010 11:42:49 AM

Work Order ID: 59780

Parent Item:

D206-642-541



Start Date: 6/10/2010

Required Date: 6/25/2010

Start Qty: 1.00

Required Qty: 1.00

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C

07-02-23 IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD

IPP Rev:E 08-04-17

as per PAR 08-015 DD verified by:EC

D3275-1

Manufactured No

190

Each

71.0000

12

12

Crossbolt Spacer

<u>Location</u>	<u>Lo</u>	c Oty	Loc Code	•
LG		71		
53453		8		
57513		57		
58179		6		
	250	Each	4 523 000	2

CR3212-4-03

Purchased

No

Cherry Rivet

Location	Loc	Oty	Loc Code
ST311		4523	
111359		5	
112314		30	
114436		1476	
,114450		1012	
114859		2000	
	250	Each	67.0000

D3415-041

Manufactured No

Nut Plate

Location	Loc Qty	Loc C
ST056	67	
(33842)	67	

<u>Code</u>

VD110107106

10/07/06

Dart	Aerospace	Ltc

W/O:			V	ORK ORDER CHAN	IGES					•
DATE	STEP	PRO	OCEDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
· · · · · · · · · · · · · · · · · · ·										
								-		
Part No	•	PAR #:	Fault Ca	tegory:	NCI	R: Yes N	lo DQA:		Date:	
	R	esolution:	Dispositi	ion:	QA:	N/C Clo	sed:		Date:	
NCR:		1	WORK ORI	DER NON-CONFORI	MANCE	(NCR)				
DATE	STEP	Description of NC Section A	Initial	Corrective Action S Action Description	ection B	Sign &	Verifica Section		Approval Chief Eng	Approval QC Inspector
			Chief Eng	Chief Eng		Date	Geetion		Office Ling	ao inspector
-										
NOTES										

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Work Order ID: 59780

Parent Item:

D206-642-541

IPP Rev:E

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 IPP Rev:D 07-12-06

08-04-17

Added SS Wearplates & Gaskets JLM

replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

CCR264SS3-3

Purchased

No

250

Each

554.0000

Start Date: 6/10/2010

Start Qty: 1.00

Cherry Rivet

Location	<u>Lo</u>	Loc Code	
ST311	,	554	
112314		4	
113 <u>53</u> 9		60	
13973		490	
(—	250	F1	£ 752 000

ALS4-1032-130

Purchased

No

Each

5,752.000

78

78

Required Date: 6/25/2010

Required Otv: 1.00

Insert

Location	Loc	c Oty	Loc Code		•	
PKG11		5000				
(14723)		5000			X 78 9	1 10/07/06
ST282		305				6
110511		38				
114407		267				
ST381		447				
114654		447				
	270	Each	19.0000	1	1	

D3536-15

Manufactured No

Gasket

Location	<u>on</u>	Loc Qty	Loc Code
FP		7	
	56055	7	
FP11		12	
	59238	12	

VIJ61 10 10 7/26

	rospace Lt	Q	· · · · · · · · · · · · · · · · · · ·						· · · · · · · · · · · · · · · · · · ·		
W/O:		WORK ORDER CHANGES PROCEDURE CHANGE By Date Qty Approval Chief Eng / Prod Mgr									
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Chief Eng /	Approva QC Inspecto		
							!				
Part No):	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA :	ļ	Date: _			
	Resolution:			Disposition: C			QA: N/C Closed: Date:				
NCR:			WORK ORDI	ER NON-CONFORMAN	ICE (NCR)					
		Description of NC		Corrective Action Section	Section B Verific			tion Approval	Approva		
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section		Chief Eng	QC Inspect		
,											
						ĺ		l			

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Work Order ID: 59780

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

Parent Item:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C IPP Rev:D

Added SS Wearplates & Gaskets JLM 07-02-23 07-12-06 replace NAS1515H3L to D3672-1 DD

IPP Rev:E

08-04-17

as per PAR 08-015 DD verified by:EC

D3536-23

Gasket

Manufactured No

Manufactured

Manufactured

270

270

270

Each

Loc Qty

12 1

Each

12

12.0000

Loc Code

19.0000

Start Date: 6/10/2010

Start Qty: 1.00

D3536-35

Gasket

Location

Location

FP011

FP012

58637 58683

58819

Loc Qty

19 7 12

Loc Qty

1

26

12 14

Each

Loc Code

10107106

Required Date: 6/25/2010

Required Qty: 1.00

10/07/06

Gasket

D3536-39

Location FP

FP12

51637

Loc Code

27.0000

10/07/06

Dart	Aerospace	e Ltd
------	-----------	-------

W/O:		WORK ORDER CHANGES						•			
DATE	STEP	PRO	CEDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
					:						
					:						

Part No: PAR #:			Fault Ca	Fault Category: NCR: Yes No			lo DQA:	DQA: Date:			
Resolution:				Disposition: QA: N/C Closed							
NCR:		V	VORK OR	DER NON-CONFOR	RMANCE	(NCR)					
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Action Descript Chief Eng	Section B	Sign & Date	Verificat Section		Approval Chief Eng	Approval QC Inspector	
			Office Ling	Office Eng		Date					
									:		
		, , ,									
						-w		_			
					:						
NOTES											

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Work Order ID: 59780

Parent Item:

Parent Item Name:

D206-642-541

Comments:

Replacement Skidtube

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C 07-02-23

IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM

IPP Rev:E 08-04-17

replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC



Start Date: 6/10/2010

Required Date: 6/25/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-15

Wearshoe

Manufactured No

Manufactured

Manufactured

270

Each

16.0000

Location Loc Qty Loc Code FP 6 FP18 10

270

59236

10 270

Each

Each

15.0000

10/07/04

D3535-35

Wearshoe

Location FP018

57528

Loc Qty 15 2

13

Loc Code

13.0000

Loc Code

Al 10107106

D3535-39

Wearshoe

Location FP

FP18

51619

Loc Qty

1 12

12

X1 10 10 7 106

Dart Aerospace Ltd W/O: WORK ORDER CHANGES DATE STEP PROCEDURE CHANGE By Date Qty Chief Eng / Prod Mgr

Part No:	PA	AR #:	Fault Category:	NCR: Yes No D	QA:	Date:
	Resolution:		Disposition:	QA: N/C Closed: _		Date:

Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
		Description of NC		Corrective Action Section B			Ammuoval	Annaval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
							·	
				•				
•								
	-							

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Page 6

Work Order ID: 59780 Parent Item: D206-642-541 Parent Item Name: Replacement Skidtube Start Date: 6/10/2010 **Required Date: 6/25/2010** Comments: IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM Start Qty: 1.00 Required Qty: 1.00 Added SS Wearplates & Gaskets JLM 07-02-23 replace NAS1515H3L to D3672-1 DD IPP Rev:D 07-12-06 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC D3535-23 Manufactured 270 Each 11.0000 Wearshoe Location Loc Qty Loc Code FP21 11 10/07/06 11 D3537-3 270 Manufactured No Each 10.0000 Wearpad Location Loc Qty Loc Code FP17 10 以100706 10 D3537-1 Manufactured No 270 Each 49.0000 Wearpad Loc Qty Location Loc Code FP 55465 FP17 12 57713 3 58178 FP18 x9 JU10107/06 80 x80 YU 10/02/06 36 36 AN960C10L NAS1149C0332 Purchased No 270 0.0000 Each washer 11115000

Dart Aerospace Lt

W/O:		WORK ORDER CHANGES							• • • • • • • • • • • • • • • • • • • •			
DATE	STEP	PRO	PROCEDURE CHANGE					Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
				Fault Category: NCR: Yes No DQA Disposition: QA: N/C Closed:								
NCD.		T		on: DER NON-CONFORM					Date:			
NCR:	1					(14011)						
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Se Action Description Chief Eng	ection B	Sign & Date	Verifica Section		Approval Chief Eng	Approval QC Inspector		
										·		

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Required Date: 6/25/2010

Required Qty: 1.00

Work Order ID: 59780

Parent Item:

D206-642-541



Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD 08-04-17

IPP Rev:E

as per PAR 08-015 DD verified by:EC

No

AN960C416

NAS1149C0463

Purchased

Manufactured

270

270

Each

118.0000

Start Date: 6/10/2010

Start Qty: 1.00

washer

Location

ST346

Loc Qty 118 118 Loc Code

Each

1,315.000

10107/06

D3672-1

Phenolic Washer

Location

ST077

1315 315 1000

Loc Oty

Loc Code

VZ M 10107/06

AN3C4A

BOLT

Purchased

No

270

Each

1.525.000

80

Location Loc Qty ST350 1525 114103 501 114108 14 114416 12 114523 2 996

Loc Code

x00 el 10/04/00

Dart Aerospace Ltd

	•									•		
W/O:			WORK ORDER CHANGES							• •		
DATE	STEP	PRO	OCEDURE CHA	ANGE	E	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
			-100-00									
Part No:		PAR #:	Fault Category: NCR: Yes No Do				lo DQA:	A: Date:				
	R	esolution:	Disposition	on:	_ QA: N	C Clo	sed:	Date:				
NCR:			WORK ORD	ER NON-CONFORMA	NCE (VCR)						
DATE	STEP	Description of NC	Corrective Action Section B			Sign & Verificat			Approval	Approval		
	OIL!	Section A	Initial Chief Eng	Action Description Chief Eng		Date	Section C	Chief Eng	QC Inspector			
										•		
	,											

Picklist Print

Friday, June 11, 2010 11:42:49 AM

Work Order ID: 59780 Parent Item:

D206-642-541

IPP Rev:E



Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C 07-02-23

IPP Rev:D 07-12-06

08-04-17

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

Start Date: 6/10/2010 Start Qty: 1.00

Required Date: 6/25/2010

Required Qty: 1.00

AN4C5A

Purchased

No

270

Each

519.0000

BOLT

Location ST346

Loc Qty 519 19 500 Loc Code

VI N 10107106

D2646

Aft Cap

Manufactured

No

270

Each

109.0000

1

Location Loc Qty Loc Code FP-4 99 57332

FP6

52663

99 10 10

x1 201 10107106

D3413-1

Manufactured No

270

37.0000

Ring

Location ST473

51586 53446

58524

Loc Qty 37 1

23

13

Each

Loc Code

20/4/06 he ix

W/O:			WORK ORDER CHANGES									
DATE	STEP	PRO	CEDURE CH	ANGE		Ву	Date	ty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
				•								
· · · · · · · · · · · · · · · · · · ·			-1	71.5								
			Fault Cate	Fault Category: NCR: Yes No DQA					\: Date:			
	R	esolution:	Disposition	Disposition: QA: N/C Close				ed: Date:				
NCR:		V	VORK ORD	ER NON-CONFOR	MANCE	(NCR)						
DATE	STEP	Description of NC			Verifica			on				
	0121	Section A	Initial Chief Eng	Action Descriptio Chief Eng	on	Sign & Date	Section		Chief Eng	QC Inspector		
					1							



DESI	c _N CP	DRAWN BY	DART AEROSPACE USA, INC.
CHE	CKED A	APPROVED 4	DRAWING NO. REV. D
i	#	-#	D3274 SHEET 1 OF 4
DATE			TITLE SCALE
06.	12.19		SKIDTUBE ASSEMBLY NTS
Α		04.03.15	NEW ISSUE
В		04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76
С		05.03.16	ADD -043; NEW INSERTS
D		06.12.19	NEW INSERTS, SS WEARSHOE + GASKET



Qty	Qty			
-041	-043	Part Number	Description	
Х		D3274-041	SKIDTUBE ASSEMBLY	
	Х	D3274-043	SKIDTUBE ASSEMBLY	
1	1	D2600-1-240	EXTRUSION	
1	1	D2646	AFT CAP	
12	12	D2649	CROSS BOLT SPACER	
12	37	D3275-1	CROSS BOLT SPACER	
1	_1	D3282-041	FLOAT WEB	
1	1	D3285-1	CAP	
1	1	D3413-1	RING	
1	1	D3415-041	NUT PLATE	
1	1	D3535-15	WEARSHOE	
1	1	D3535-23	WEARSHOE	
1	1	D3535-35	WEARSHOE	
1	1	D3535-39	WEARSHOE	
1	1	D3536-15	GASKET	
1	1	D3536-23	GASKET	
1	1	D3536-35	GASKET	
1	1	D3536-39	GASKET	
9	9	D3537-1	WEARPAD	
1	1	D3537-3	WEARPAD	
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)	
80	80	AN3C4A	BOLT	COP
1	1	AN4C5A	BOLT	
1	·· 1 ·	AN960C416	WASHER	
80	80	AN960C10L	WASHER	. ,
2	2	CCR264SS3-3	RIVET UNCON	
2	2	CR3212-4-03	RIVET SUELLA	
2	2	NAS1515H3L	WASHER WASHER	

GENERAL NOTES:

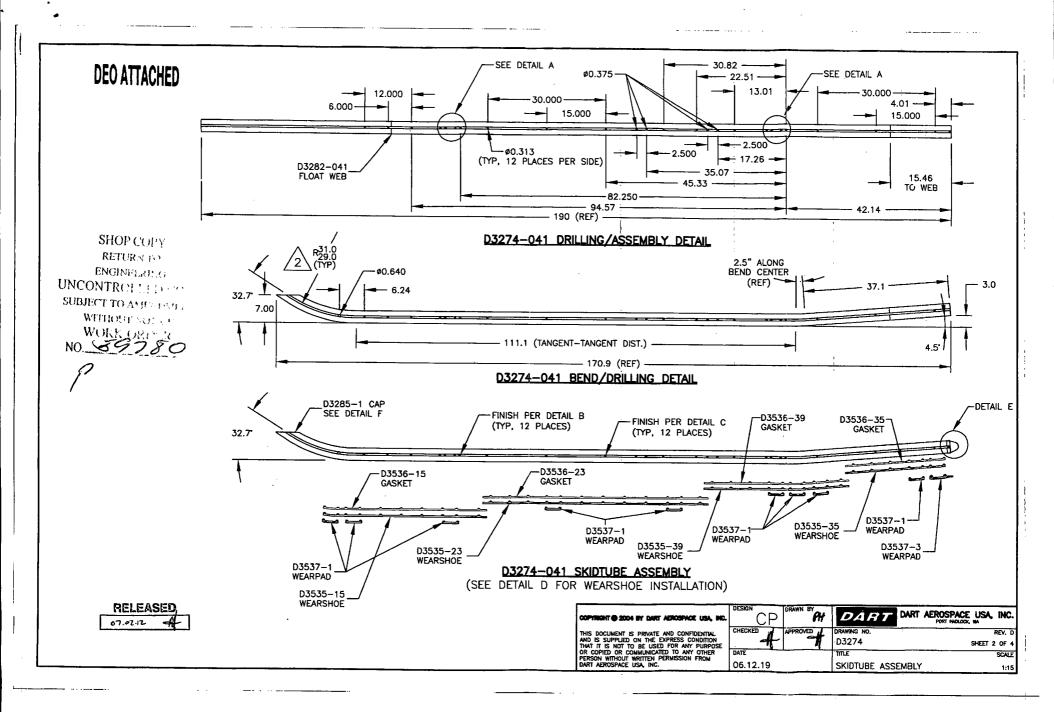
- 1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2. DAMAGE TOLERANCE ON FWD BEND:

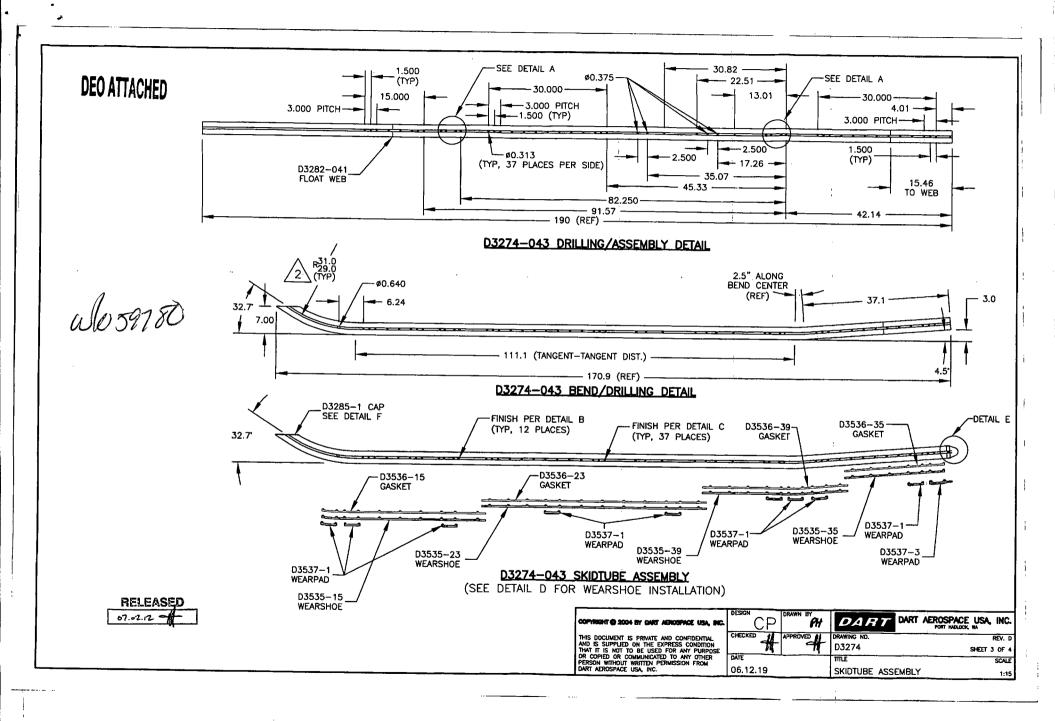
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

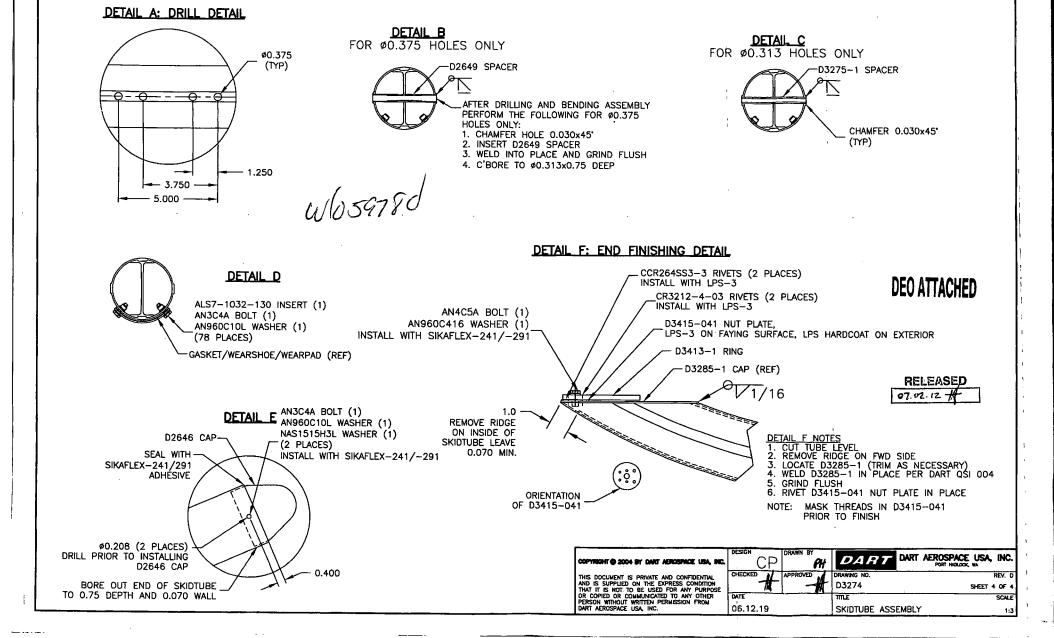
- 3. ALL HOLES DRILLED ON CENTERLINES.
- 4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- 5. WELDING TO BE DONE PER DART QSI 004.
- 6. FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- 7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH, INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- 8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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DRAWING	NO.	TITLE	REV. D DART AEROSPACE	USA, INC D.E.O. NO.	SHEET NO.	SCALE
D3274		SKIDTUBE ASSEMBLY	ENGINEERING C	DRDER D3274-D-1	SHEET 1 OF 1	NTS
DRAWN	a	CHECKED	MFG. APPR.	APPROVED APP	DE APPR.	
DATE	09.06.	17 DATE 09.06-	23 DATE 59/06/23	DATE 09/06/23	DATE 09.06.23	

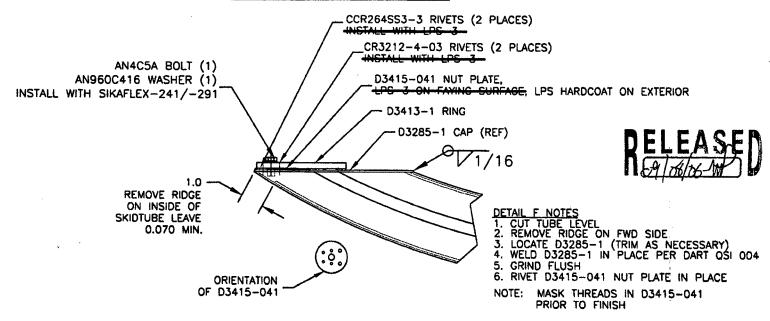
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS 3" AFTER FINISH AND INSTALLATION OF INSERTS."

COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

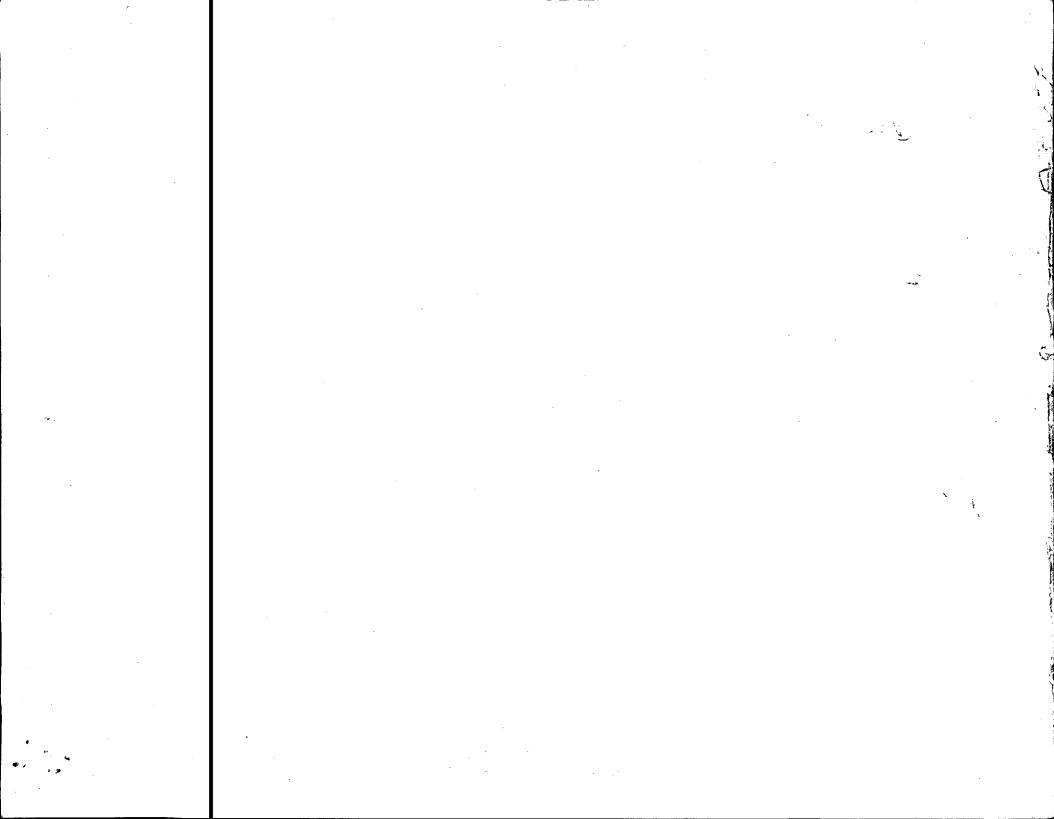
DETAIL F: END FINISHING DETAIL



W/0/55780

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NO330

AWS D17.1.2001 QUALIFICATION TEST RECORD

Maine. 1/21 Class	Elliott.
Job number: 5735	
Part number: Dace	·W12 · 541
Description: Coal	tube
Welding Process: Tig	Mig[]
	emmun
Current: AC DC	
& 1	
-	TEST REQUIREMENTS AND RESULTS
_4	EST REQUIREMENTS AND RESCET
	;
	/
Visual:	pass['] fail[] pass['] fail[]
Penetration:	pass[] fail[]
UNACCEPTABLE	
Cracks:	$pass[\sqrt]$ fail[]
Undercut:	pass[]/ fail[]
Pin holes:	pass[/] / fail[]
Overlap (cold lap)	pass[v]/, fail[]
Porosity (surface):	pass[] fail[]
Coloration:	pass[fail]
	1 1 2 1
Qualifier / Of //	Date of Test Coupon-10.05.05
0 //	2.3.1
Welder Thoroland	Www. Date of Test Coupon 10-05-05
	A
//	

The above named individual is qualified in accordance with AWS D17.1.2001 to weld